SEQUENCE LISTING

<110> Donoho, Gregory Scoville, John Turner, C. Alexander Jr. Friedrich, Glenn Zambrowicz, Brian Sands, Arthur T.

<120> Novel Human Membrane Proteins and Polynucleotides Encoding the Same

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<150> US 60/169,427

<151> 1999-12-07

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Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr
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Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro Pro Asn Met Thr Leu
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Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp
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Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp
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Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val
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His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala
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Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys
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Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu Ser
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cggggggctg tettecacta etteetgete tgtgeettea eetggatggg eettgaagee
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<210> 14

<211> 504

<212> PRT

<213> Homo sapiens

<400> 14

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Leu Tyr Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp
                        295
Ala Pro Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn
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Leu Ala Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala
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                                    330
Ala Cys Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala
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Phe Thr Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val
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                            360
                                                365
Arg Val Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu
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Val Gly Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala
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                                        395
Asn Ser Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser
                405
                                    410
Leu Glu Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr
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Ile Thr Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val
                            440
                                                445
Val Leu Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr
                        455
                                            460
Ala Val Lys Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser
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Arg Ala Leu Gln Val Gly Cys Pro Ser Ser Ile Ser Gly Pro Ile Ser
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Cys Asp Gln Lys Gly Arg Ile Met
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<211> 885
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<211> 294

<212> PRT

<213> Homo sapiens

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Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu Arg Pro
                            40
Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala
                        55
Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr
                    70
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Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro
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Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala
           100
                                105
Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys
                            120
                                                125
Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr
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Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val
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Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly
                                    170
Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser
                                185
Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu
        195
                            200
                                                205
Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr
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Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu
                    230
                                        235
Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val
                245
                                    250
Lys Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala
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                               265
Leu Gln Val Gly Cys Pro Ser Ser Ile Ser Gly Pro Ile Ser Cys Asp
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Gln Lys Gly Arg Ile Met
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<211> 1068
<212> DNA
<213> Homo sapiens
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<210> 18

<211> 355

<212> PRT

305

<213> Homo sapiens

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Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg

Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala Leu Gln Val

310

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Arg Ile Met
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<210> 19
<211> 690
<212> DNA
<213> Homo sapiens
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                                                                       180
gctgcctgct gggcccgggg ggctgtcttc cactacttcc tgctctgtgc cttcacctgg
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                                                                       300
                                                                       360
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cacggetact tecteateae ettectett ggeatggtgg teetggeeet ggtggtetgg
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                                                                       600
aagatettea eeetgteeeg tgetacageg gteaaggage gggggaagaa eeggtgetea
ccctgctggg cctctcgagc cttgcaagtt gggtgtccat cgtccatctc tggtccaatc
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<210> 20
<211> 229
<212> PRT
<213> Homo sapiens
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Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe
Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp
Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp
                    70
                                        75
Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe
                85
                                    90
Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp
            100
                                105
Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr
        115
                            120
                                                125
Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu
                        135
Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val
                    150
                                        155
His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala
                                    170
Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys
            180
                                185
Glu Arg Gly Lys Asn Arg Cys Ser Pro Cys Trp Ala Ser Arg Ala Leu
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Gln Val Gly Cys Pro Ser Ser Ile Ser Gly Pro Ile Ser Cys Asp Gln
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Lys Gly Arg Ile Met
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<211> 477
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<213> Homo sapiens
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                                                                       240
accatgtacg ccctctatat caccgtccac ggctacttcc tcatcacctt cctctttggc
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                                                                       360
aaggagcggg ggaagaaccg gtgctcaccc tgctgggcct ctcgagcctt gcaagttggg
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<210> 22
<211> 158
<212> PRT
<213> Homo sapiens
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                                25
Gly Leu Met Gly Gly Asn Gly Arg Gly Thr Phe Thr Asp Arg Lys Ala
                            40
                                                 45
Gln Pro Gly Asp Phe Leu Gly Leu Leu Ala Arg Gly Thr Thr Pro Ser
                        55
                                            60
Pro Thr Thr Ala Ala Pro Ser Ser Arg Cys Trp Phe Arg Glu Gly Thr
                    70
                                        75
Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly Tyr Phe Leu Ile Thr
                                    90
Phe Leu Phe Gly Met Val Val Leu Ala Leu Val Val Trp Lys Ile Phe
            100
                                105
                                                     110
Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg Gly Lys Asn Arg Cys
                            120
Ser Pro Cys Trp Ala Ser Arg Ala Leu Gln Val Gly Cys Pro Ser Ser
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Ile Ser Gly Pro Ile Ser Cys Asp Gln Lys Gly Arg Ile Met
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<210> 24 <211> 521 <212> PRT

<213> Homo sapiens

<400> 24

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Lys Leu Ala Glu Pro Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro
                            200
Pro Asn Met Thr Leu Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr
                        215
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Thr Gly Asp Trp Ser Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu
                    230
                                        235
Gly Thr Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu Leu Leu
                245
                                    250
Arg Pro Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser
                                265
Gln Ala Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile
                            280
Leu Tyr Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp
                        295
Ala Pro Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn
                                        315
Leu Ala Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala
                325
                                    330
Ala Cys Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala
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Phe Thr Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val
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                            360
                                                365
Arg Val Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu
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Val Gly Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala
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Asn Ser Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser
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Leu Glu Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr
                                425
Ile Thr Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val
                            440
                                                445
Val Leu Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr
                        455
                                            460
Ala Val Lys Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu
                    470
                                        475
Gly Leu Ser Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr
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Pro Leu Gly Leu Ser Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu
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<210> 25
<211> 936
<212> DNA
<213> Homo sapiens
<400> 25
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Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr
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Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala
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Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys
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Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly
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Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu
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Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu
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Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val
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Lys Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu Leu Gly Leu
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Ser Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu
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Gly Leu Ser Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser Leu Gln Gly
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Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro Pro Asn Met Thr Leu
Thr Cys Val Phe Trp Asp Val Thr Lys Gly Thr Thr Gly Asp Trp Ser
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Ser Glu Gly Cys Ser Thr Glu Val Arg Pro Glu Gly Thr Val Cys Cys
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Cys Asp His Leu Thr Phe Phe Ala Leu Leu Arg Pro Thr Leu Asp
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Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala Gly Cys Gly
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Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr Ala Phe Leu
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Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro Lys Ile His
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Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe Leu Val
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Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp Ala Arg
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Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr Gly Leu
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Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu Tyr Ile Thr Val His Gly
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Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala Leu Val
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Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys Glu Arg
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Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu Gly Leu Ser
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Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala Phe

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Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe
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Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp
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Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr
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Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu
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His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala
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Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala Thr Ala Val Lys
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Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu Gly
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Lys Val Leu Thr Leu Leu Gly Leu Ser Ser Leu Val Gly Val Thr Trp
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Gly Leu Ala Ile Phe Thr Pro Leu Gly Leu Ser Thr Val Tyr Ile Phe
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Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile Ser Gln Ala
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Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile Ile Leu Tyr
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Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu Asp Ala Pro
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Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu Asn Leu Ala
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Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys
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Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr
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Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val
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Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser
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Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu
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Leu Glu Ile Val Phe Ser His Gln Arg Pro Pro Pro Asn Met Thr Leu
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Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp Ala Arg
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Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp Met Gly
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Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe Asn Thr
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Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp Gly Leu
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Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr Gly Leu
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Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr Ser Leu Glu Leu Cys Trp
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Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala Leu Val
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Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala Val Arg Val Phe
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Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser Leu Val Gly Trp
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Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser Ala Asn Ser Tyr
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His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met Val Val Leu Ala
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Val Gly Val Thr Trp Gly Leu Ala Ile Phe Thr Pro Leu Gly Leu Ser 340 345 350

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Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp Ala Ala Cys Trp
Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys Ala Phe Thr Trp
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205

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